

Attorney Docket No.: DRE-0067
Inventors: Laurencin et al.
Serial No.: 10/052,121
Filing Date: January 17, 2002
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This listing of the claims will replace all prior versions and listings of claims in the application:

Listing of Claims:

Claim 1: (currently amended) A scaffold for tissue engineering comprising biocompatible, biodegradable polymer-based hollow microcarriers ranging from 500 to 860 μ m in diameter with a density equal to or less than water ~~and a pore size ranging from 500 to 860 μ m~~ bonded together into an ~~interconnected~~, three dimensional scaffold with a density equal to or less than water and a fully interconnected pore network with a pore size range of 113 to 356 μ m.

Claim 2: (original) The scaffold of claim 1 which is seeded with cells via culturing in vitro in a rotating bioreactor.

Claim 3: (previously presented) The scaffold of claim 2 wherein the seed cells comprise osteoblast cells, endocrine cells, fibroblasts, endothelial cells, genitourinary cells, lymphatic vessel cells, pancreatic islet cells, hepatocytes, muscle cells, intestinal cells, kidney cells, blood vessel cells, thyroid cells, parathyroid cells, cells of the adrenal-hypothalamic pituitary axis, bile duct cells, ovarian or testicular cells, salivary secretory cells, renal cells, chondrocytes, epithelial cells, nerve cells or progenitor cells.

Claim 4: (canceled)

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Claim 5: (original) A method for regenerating a selected tissue comprising seeding the scaffold of claim 1 with cells which generate the selected tissue and culturing the scaffold and seeded cells in a rotating bioreactor.

Claim 6: (previously presented) The method of claim 5 wherein the seed cells comprise osteoblast cells, endocrine cells, fibroblasts, endothelial cells, genitourinary cells, lymphatic vessel cells, pancreatic islet cells, hepatocytes, muscle cells, intestinal cells, kidney cells, blood vessel cells, thyroid cells, parathyroid cells, cells of the adrenal-hypothalamic pituitary axis, bile duct cells, ovarian or testicular cells, salivary secretory cells, renal cells, chondrocytes, epithelial cells, nerve cells or progenitor cells.